

# Investigation Report

## Department of Health

### Clean Water Branch

FILE

ID #: PA0991E

Date of investigation: 1/20/2011

Page 1 of 5

Permit/File/WQC No: R50A533

Island: Oahu

Facility: Waste Management Hawaii/CCH

#### Complaint/Background Description:

On January 20, 2011, the Department of Health (DOH), Clean Water Branch (CWB), conducted an inspection of the City and County of Honolulu (CCH) Waimanalo Gulch municipal solid waste landfill (Landfill) which is located at 92-460 Farrington Highway, Kapolei, Hawaii. The inspection was conducted as a follow up to the inspection conducted on January 13, 2010. Matthew Kurano, Jamie Tanimoto and Michael Tsuji of the DOH-CWB conducted the inspection. Jose Ruiz and Tom Miyashiro from the DOH, Solid and Hazardous Waste Branch (SHWB) were present during the inspection. Justin Lottig, Market Area Environmental Protection Manager for Waste Management Hawaii and Jesse Frey, Landfill Engineer for Waste Management Hawaii were present throughout the inspection. Mr. Joe Whelan, Manager for Waste Management Hawaii, was available to answer questions at the beginning of the inspection. Waste Management Hawaii operates the Landfill.

#### Permit History

The CCH, Refuse Division, owns the Landfill and has National Pollutant Discharge Elimination System (NPDES) permit coverage through a general permit authorizing the discharge of storm water associated with industrial activities from the Landfill to State waters. The Landfill's Notice of General Permit Coverage (NGPC), File No. HI R50A533, only authorizes the discharge of storm water discharges associated with industrial activities that will not cause or contribute to a violation of applicable State water quality standards and comply with permit effluent limitations. Discharges of effluent, leachate, or solid waste are not permitted by the issued NGPC.

The NGPC, File No. HI R50A533, was effective as of August 30, 2010, and expires on October 21, 2012. Previous inspections of the Landfill associated with discharges from the E6 cell were conducted on December 23, 2010, January 4, 2011, January 6, 2011, and January 13, 2011. The previous inspections are documented in Investigation Report ID#s, PA0991, PA0991A, PA0991B, PA0991C and PA0991D.

#### Findings Description:

The weather was mostly sunny throughout the inspection. The following findings were either observed or noted before, during or after the inspection:

1) ☐ The DOH-CWB and DOH-SHWB representatives met at the Landfill at approximately 9:20 am. J. Frey and J. Lottig were present at the start of the inspection. To begin the inspection, the Landfill's detention basin (Photograph 1) was observed. At the time of inspection, no outflow of the detention basin's contents was observed. Chris Sprague from the CCH was present at the Landfill at the time and stated that there was no flow out of the detention basin for two (2) days. The area between the detention basin and Farrington Highway appeared much cleaner (Photograph 2). A minimal flow was observed running down the Landfill's concrete lined drainage channel.

2) ☐ A mobile pump was observed positioned adjacent to the Landfill's detention basin. Representatives from the DOH-CWB asked the representatives from Waste Management Hawaii why a pump was located next to the detention basin. J. Lottig stated that the water in the detention basin was being pumped into a Waste Management Hawaii water truck and being used for dust control. Waste Management Hawaii confirmed that the water impounded in the Landfill's detention basin included the contaminated storm water that was pumped out of the E6 cell between January 13, 2011 and January 16, 2011.

3) ☐ DOH-CWB representatives questioned whether the Landfill was authorized to discharge the contents of the detention basin onto the surface of the Landfill as dust control. J. Whelan stated that Steve Chang of the DOH-SHWB knew what they were doing and that it was allowed. J. Whelan stated that his plan was to pump down

# Investigation Report

## Department of Health

### Clean Water Branch

ID #: PA0991E

Date of investigation: 1/20/2011

Page 2 of 5

the detention basin, utilizing the detention basin's contents for dust control, until a colloidal level was encountered. J. Whelan stated that when the colloidal level was encountered, flocculent would be added to increase settling and the detention basin would be further dewatered via dispersal of the contents onto the surface of the Landfill.

4) ☐ DOH representatives contended that the contents of the Landfill's detention basin were leachate and/or contaminated storm water. J. Whelan stated that he did not believe it was leachate as the contents of the detention basin did not have a long residence time with solid waste. After discussion with DOH representatives, J. Whelan stated that he would suspend the use of the contents of the detention basin as dust control until further notice. J. Whelan then excused himself in order to speak on the phone away from the group.

5) ☐ While J. Whelan was on the phone, DOH-CWB representatives asked J. Lottig and J. Frey to detail the event that led to the discharge of solid waste from the Landfill to State waters on January 13, 2011. J. Lottig stated that he was not present on Oahu on January 13, 2011. J. Lottig stated that he was working on Kauai during that time. However, J. Frey confirmed that he had been at the Landfill on January 13, 2011.

6) ☐ M. Kurano directly asked J. Frey to confirm statements that he had made to DOH-CWB representatives on January 13, 2011. J. Frey made the following statements:

i. ☐ The opening to the Hobas pipe, which is located on the southwest corner of the E6 cell, was closed on the morning of Thursday, January 13, 2011, and remained closed throughout the rain event which flooded the E6 cell for the third time since December 18, 2010.

ii. ☐ The opening to the Hobas pipe was closed until the evening of January 13, 2011, at which time the Hobas pipe was opened to allow pumping from the E6 cell.

iii. ☐ The heavy flow that the DOH-CWB documented running down the Landfill's concrete line drainage channel on January 13, 2011, at approximately 12:30pm, was only due to hydraulic connections throughout the Landfill and was not discharged from the E6 cell.

7) ☐ In response to J. Frey's statement that the opening to the Hobas pipe had been closed prior to the evening of January 13, 2011, M. Kurano stated that the opening to the Hobas pipe had been observed to be open as of the inspection of the Landfill conducted on January 4, 2011. In response, J. Frey stated that:

i. ☐ The opening to the Hobas pipe which was located on the southwest side of the E6 cell had been closed prior to January 13, 2011.

ii. ☐ The contractor onsite, Goodfellow Bros., was responsible for opening or closing the Hobas pipe but would only do so under his direction.

8) ☐ DOH-CWB representatives questioned J. Frey and J. Lottig about what had occurred at the E6 cell during the January 13, 2011 rain event. J. Frey stated that he believed that the "box shaped" drainage channel which was being constructed above the E6 cell had overflowed and created a "waterfall". J. Frey stated that the "waterfall" flowed into the E6 cell and damaged the north side of the E6 cell, exposing solid waste while flooding the cell. DOH-CWB representatives asked whether the solid waste which was exposed due to the "waterfall" in the E6 cell had been discharged to the Landfill's detention basin. Waste Management Hawaii representatives stated that some of the solid waste discharged from the Landfill could have been from the E6 cell.

9) ☐ M. Kurano asked Waste Management Hawaii representatives how solid waste from the E6 cell, which was exposed by the "waterfall" that cascaded into the north side of the E6 cell, could have discharged from the E6 cell to the Landfill's detention basin and subsequently to State waters. Neither J. Frey nor J. Lottig could provide an explanation. J. Lottig stated that the berm/dam on the south side of the E6 cell had not been overtopped and even if it had, overflow over the berm/dam would not end up in the Landfill's detention basin.

10) ☐ J. Frey stated that the origin of all of the solid waste discharged on January 13, 2011, could not be "fingerprinted". J. Frey stated that the Landfill was a "mess" but that there were no large failures as a result of the January 13, 2011, rain event which exposed solid waste anywhere else in the Landfill except in the E6 cell.

# Investigation Report

## Department of Health

### Clean Water Branch

ID #: PA0991E

Date of investigation: 1/20/2011

Page 3 of 5

11) J. Frey and J. Lottig could not answer how waste from the E6 cell was transported to the Landfill's detention basin. According to J. Frey, the opening to the Hobas pipe was closed until opened on the evening of January 13, 2011, and there was no topping of the E6 cell such that discharges flowed from the E6 cell to the Landfill's detention basin.

12) After the above documented discussions between DOH-CWB representatives and J. Frey and J. Lottig, J. Whelan returned from his phone call. DOH-CWB representatives asked J. Whelan to clarify what he believed occurred on January 13, 2011 that led to the discharge of solid waste from the Landfill to State waters. J. Whelan made the following statements:

i. Solid waste was exposed in the E6 cell due to run-on from the rain event which occurred on January 13, 2011.

ii. The water collected in the E6 cell, even though it had passed through and had mingled with solid waste, was not "leachate" because it did not have a long residence time with solid waste.

iii. On the morning of January 13, 2011, prior to the conference call between the CCH, DOH, and Waste Management Hawaii, he observed discharges from the Landfill's detention basin over the detention basin's berm.

iv. On the morning of January 13, 2011, he observed solid waste flowing over the berm of the Landfill's detention basin but could not take a close look because it was not safe due to the discharge's rapid flow rate over the detention basin's berm.

v. Representatives from the CCH had observed the discharges over the detention basin's berm on the morning of January 13, 2011.

vi. He could not confirm whether all of the solid waste discharged from the Landfill on the morning of January 13, 2011, was from the E6 cell, but he believed at least some of the solid waste discharged had originated from the E6 cell.

vii. Solid waste was able to discharge from the E6 cell to the Landfill's detention basin because the opening to the Hobas pipe had been open on the morning of January 13, 2011.

viii. The opening to the Hobas pipe had purposefully been left open to act as an overflow pipe in the event the E6 cell flooded.

ix. The berm/dam constructed on the south side of the E6 cell was built up to a level higher than the opening of the Hobas pipe so that if the water that accumulated in the E6 cell rose to the top of the berm, the contents of the E6 cell would drain through the opening of the Hobas pipe.

x. Contents from the E6 cell including solid waste, discharged from the E6 cell through the opening to the Hobas pipe on January 13, 2011.

xi. The difference in the water level and the high water mark that was observed by M. Kurano and a US Environmental Protection Agency representative on January 13, 2011, could only have been due to draining of the E6 cell through the opening of the Hobas pipe.

xii. He was unsure whether the discharges from the Landfill, which included solid waste, had been disclosed to the DOH prior to, or during the conference call held on January 13, 2011, between the DOH, CCH, and Waste Management Hawaii.

13) After the statements made by J. Whelan, J. Frey made the following statements:

i. In the days leading up to January 13, 2011, J. Frey had been in communication with representatives from Goodfellow Bros. regarding setting up pumps in the event that E6 was flooded.

ii. He may have implicitly ordered opening the Hobas pipes since setting up the pumps would imply opening the Hobas pipe but he was not sure.

iii. On January 13, 2011, he could not actually verify whether the Hobas pipe was open or not.

iv. On January 13, 2011, he was primarily concerned with stability of the berm/dam on the south side of the E6 cell.

14) After statements by Waste Management Hawaii representatives, the E6 area of the Landfill was inspected. The new headwall (Photograph 3), located above the Landfill's expansion area, was observed. The headwall was being constructed in an area north of the E6 cell. The headwall is part of a storm water diversion system designed to prevent storm water run-on from flowing into the active areas of the Landfill (Photograph 4). Waste Management Hawaii representatives reiterated that had the series of storms starting from December 18, 2010

# Investigation Report

## Department of Health

### Clean Water Branch

ID #: PA0991E

Date of investigation: 1/20/2011

Page 4 of 5

had not occurred for three (3) more weeks, the multiple flooding of the E6 cell and the complications resulting from them would never have occurred.

15) ☐ The E6 cell (Photograph 5) had much lower water levels at the time of inspection. The north side of the E6 cell was being repaired at the time of inspection. The water level in the south side of the E6 cell was being lowered via pumping. Water pumped from the E6 cell was being taken to a wastewater treatment plant for disposal. What appeared to be off gassing was observed within the E6 cell. At several points throughout the liquid still present in the E6 cell, continuous streams of bubbles were observed.

16) ☐ The opening to the Hobas pipe, which is located on the southwest side of the E6 cell, (Photograph 6) was observed during the inspection. The opening to the Hobas pipe was closed (Photograph 7) at the time of inspection. Significant amounts of solid waste and debris were observed in the area around the opening of the Hobas pipe. Solid waste observed in the area included medical waste such as intravenous bags (IV) (Photographs 8 and 9) and syringes (Photograph 10).

17) ☐ The receiving water around the Landfill's outfall (Photograph 11) was observed after the inspection of the Landfill on January 20, 2011. A turbid plume was observed around the Landfill's outfall. The plume appeared to extend towards the south. A warning sign was observed near the Landfill's outfall (Photograph 12).

18) ☐ The Ko Olina Lagoon 4 (Photograph 13) was observed during the inspection. The water quality within Lagoon 4 appeared to have improved significantly as compared to the water quality observed on January 13, 2011. Ko Olina representatives stated that floatable debris was still being collected within the Ko Olina lagoons.

19) ☐ Eddie Belluomini, Operations Manager for Ko Olina Operations, was present at Lagoon 4. According to E. Belluomini, debris and medical waste was still being collected within the Ko Olina property and in the area immediately south of Ko Olina's property. E. Belluomini stated that the amount of medical waste that was washing up on Ko Olina's property was diminishing each day. A syringe (Photograph 14) was observed in the high water mark at Lagoon 4 during the inspection.

20) ☐ Based on findings from the inspection as well as the previous related inspections, it appears that the following conclusions can be made:

- i. ☐ Between the late evening on January 12, 2011, and the early morning hours on January 13, 2011, a storm event occurred which caused significant storm water flows down Waimanalo Gulch.
- ii. ☐ Due to the location of the Landfill's E6 cell and a lack of a completed storm water diversion system, storm water flooded the Landfill's E6 cell on January 13, 2011.
- iii. ☐ The storm water run-on into the E6 cell caused damage within the E6 cell which exposed solid waste and may have liberated floatable solid waste within the E6 cell.
- iv. ☐ The Landfill discharged solid waste and contaminated storm water from the Landfill's detention basin on the morning of January 13, 2011.
- v. ☐ J. Whelan was aware of the discharges from the Landfill on the morning of January 13, 2011, and had observed the discharges as they were occurring.
- vi. ☐ The DOH-CWB was not made aware that there had been discharges from the Landfill which included solid waste on January 13, 2011, until the DOH representatives who were conducting the inspection of the Landfill notified DOH administration at approximately 12:30 pm.
- vii. ☐ The DOH was unaware of the discharges from the Landfill which had occurred on the morning of January 13, 2011, during the conference call held between the DOH, CCH, and Waste Management Hawaii which occurred on January 13, 2011, prior to the DOH inspection of the Landfill.
- viii. ☐ The discharges of solid waste and contaminated storm water from the Landfill which occurred on the morning of January 13, 2011, included medical waste and other solid waste.
- ix. ☐ At least some of the solid waste discharged from the Landfill originated from the Landfill's E6 cell.
- x. ☐ Mixed solid waste, including medical waste, was found on the shoreline in and around the Ko Olina property as well as near the Landfill's shoreline outfall on the morning of January 13, 2011.
- xi. ☐ The Landfill was the source of solid waste, including medical waste, found throughout the Ko Olina property

# Investigation Report

## Department of Health

### Clean Water Branch

ID #: PA0991E

Date of investigation: 1/20/2011

Page 5 of 5

and nearby areas.

xii. ☐ Solid waste, including medical waste, was found on the shoreline at Ko Olina daily from January 13, 2011 to January 20, 2011.

xiii. ☐ The shoreline areas around the Landfill's outfall are recreational waters that are highly utilized.

xiv. ☐ Waste Management Hawaii representatives believe that the discharges from the Landfill could have been prevented had the Landfill's storm water diversion system been completed.

xv. ☐ Waste Management Hawaii representatives believe that pumping from the E6 to State waters which was initiated by Waste Management Hawaii on the evening of January 13, 2011, was necessary to prevent a potentially catastrophic failure at the Landfill.

21) ☐ It is unclear, due to conflicting statements made by J. Whelan and J. Frey, how the solid waste and contaminated storm water from the Landfill's E6 cell were discharged from the Landfill on the morning of January 13, 2011. Waste Management Hawaii representatives all concur that discharges from the E6 cell could have only come from the opening in the Hobas pipe. J. Frey stated that the opening of the Hobas pipe in the E6 cell was closed on the morning of January 13, 2011. In contrast, J. Whelan stated that the opening of the Hobas pipe was purposefully left open to drain the E6 cell in case the E6 cell flooded on January 13, 2011.

In conclusion, the Landfill discharged solid waste, including medical waste, and contaminated storm water from the Landfill and the Landfill's E6 cell on the morning of January 13, 2011. The Landfill representatives were aware of the discharges at the time they were occurring. The discharge of solid waste from the Landfill to State waters is a violation of Hawaii Water Pollution rules and regulations and is not permitted by the DOH.

Name: Matthew Kurano

Signature: *Matthew Kurano*

Title: EHS

Date: Feb 9, 2011

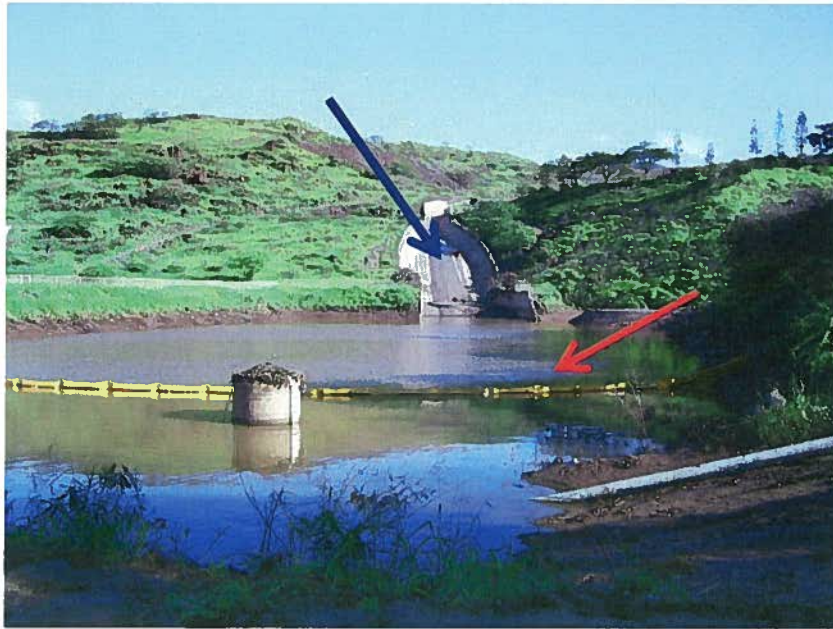
Name: Michael Tsuji

Signature: *Michael Tsuji*

Title: Enforcement Section Supervisor

Date: 2-9-11





Photograph # 1

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the Landfill's detention basin. The basin had a floating boom (Red Arrow) installed at the time of inspection. A minimal flow in the concrete lined channel (Blue Arrow) was observed.



Photograph # 2

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the area between the Landfill and Farrington Highway. The area appeared much cleaner than during the previous inspection performed on January 13, 2011.



Photograph # 3

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the Landfill's storm water diversion headwall (Red Arrow). The headwall was under construction at the time of inspection.



Photograph # 4

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the area where storm water will be diverted once the storm water diversion system is completed. Storm water will be routed around the ridge (Red Arrow) and connect to the Hobas pipe to bypass the E6 cell (Green Arrow).





Photograph # 5

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the E6 cell. The water levels within the E6 cell were much lower due to the pumping of the E6 cell's contents to trucks (Red Arrow) for disposal at a wastewater treatment plant.



Photograph # 6

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the southwest side of the E6 cell. The opening to the Hobas pipe (Red Arrow) was located on the southwest corner of the E6 cell.





Photograph # 7

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the opening of the Hobas pipe located on the southwest side of the E6 cell. The Hobas pipe was closed (Red Arrow) at the time of inspection. Solid waste (Red Circle) was observed deposited around the opening to the Hobas pipe.



Photograph # 8

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of an IV bag observed in the solid waste deposited around the opening of the Hobas pipe. Solid waste including medical waste was observed in the area.





Photograph # 9

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of medical waste (Red Arrow) observed in the solid waste deposited around the opening to the Hobas pipe.



Photograph # 10

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of a syringe (Red Arrow) observed in the area around the opening to the Hobas pipe.



Photograph # 11

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of the receiving water near the Landfill's outfall. A turbid plume (Red Arrow) extended from the Landfill's outfall into receiving waters.



Photograph # 12

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of a warning sign posed near the Landfill's oufall.





Photograph # 13

Date: January 20, 2011

Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

Description: View of Ko Olina Lagoon 4. Debris (Red Arrow) was still being washed into the Lagoon at the time of inspection.



Photograph # 14

Date: January 20, 2011

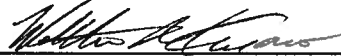
Observers: Matthew Kurano, Jamie Tanimoto, Michael Tsuji

Location: 92-460 Farrington Highway, Kapolei, Hawaii

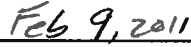
Description: View of a syringe observed in the high water mark at the Ko Olina Lagoon 4 at the time of inspection. Ko Olina representatives stated that they had found medical waste along the Ko Olina property on the day of inspection.



I certify that the fourteen (14) attached photos described above were taken by the undersigned and are a true, accurate, and unaltered representation of what was observed on January 20, 2010 at and around the Waimanalo Gulch Sanitary Landfill, 92-460 Farrington Highway, Kapolei, Hawaii.



Matthew R. Kurano



Date